

Family Living Expenditures on Ohio Farms

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FAMILY LIVING EXPENDITURES ON OHIO FARMS

Based Upon 187 Account-Book Records, 1926-1928

C. E. LIVELY

I. INTRODUCTION

During the year 1924, about fifty farm families located in various parts of Ohio began to keep household accounts in cooperation with the Agricultural Extension Department of the Ohio State University. Twenty-six of those families completed their records for the year and a brief summary of the same was issued by the Department of Rural Economics (8). An interest in this sort of investigation was thus created, and on January 1, 1926 about 100 families began keeping similar records of household expenditure and farm products used, under the supervision of the home management specialist and the county extension agents of the Agricultural Extension Department. An especially designed account book was supplied for the purpose, and all account keepers were instructed in the recording, classifying, and summarizing of accounts. All records were kept in duplicate and the original was forwarded each month through the county extension office to the Department of Rural Economics of the Ohio State University and the Ohio Agricultural Experiment Station where they were checked and tabulated. The records are being used jointly by the Departments of Rural Economics and Home Economics as the basis for several Experiment Station studies.

During the calendar years 1926, 1927, and 1928, the following records were kept and collected.

	Families	Records
Families supplying one 1-year record.....	67	67
Families supplying two 1-year records.....	30	60
Families supplying three 1-year records.....	20	60
Total.....	117	187

From these 117 families 187 complete one-year records were collected, 50 for the year 1926, 68 for the year 1927, and 69 for the year 1928. Chart 1 shows the distribution of these records by counties. Each family was visited at the end of the year and important information with respect to size of family, income, and other relevant factors was obtained. The information thus collected forms the basis of this report.

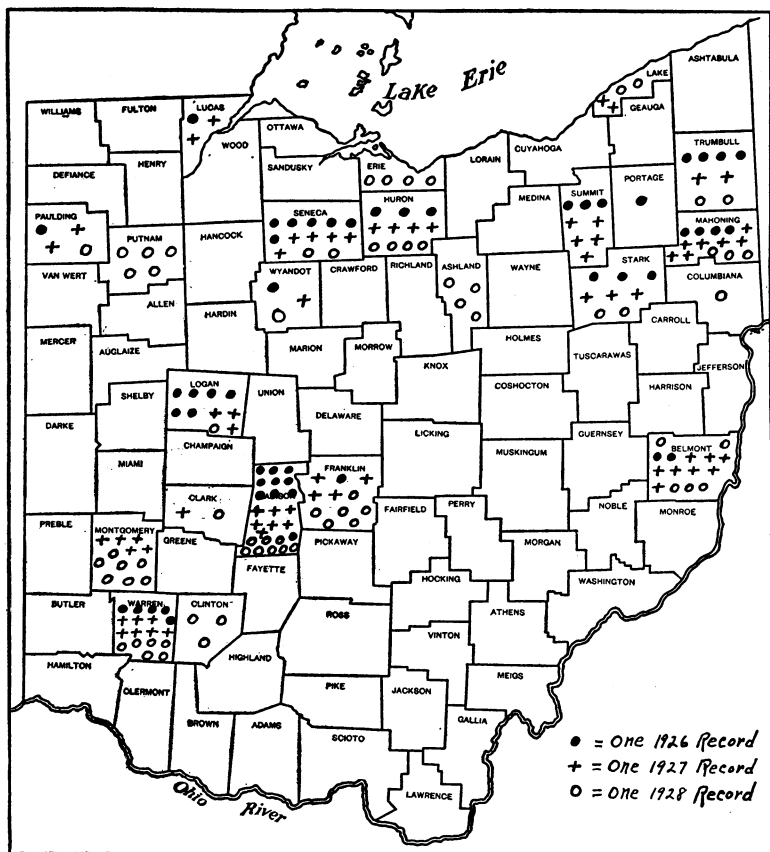


Chart 1.—Distribution of records by counties

The following classification of budgetary items has been used in this analysis:

- I. Food.
 1. All foods purchased, including candy.
 2. All foods furnished by the home farm.
- II. Clothing and Dress.
 1. All garments and yard goods used for garments.
 2. Accessories, such as belts, neckties, veils, buttons, collars, ribbons, scarfs, handkerchiefs, handbags.
 3. Toilet items:—Combs, brushes, soaps, cosmetics, perfumes; barber, hairdresser, manicurist.
 4. Jewelry:—Watches, jewels, personal ornaments.
 5. Care and Repair:—Pressing, cleaning, mending, dyeing; thread, scissors, needles, pins, tape, buttons, snaps; shoe shines and polish; care and repair of jewelry.

- III. Operating Expenses.
 - 1. Ice, fuel, light, telephone, household help, household laundry, and dry cleaning.
 - 2. Household supplies, matches, cleaners, soap and laundry supplies, fly paper, and insecticides.
 - 3. Canning supplies, wax, paraffin, and rubbers.
 - 4. Stationery and writing materials, postage, telegrams, express, and freight.
 - 5. Insurance on household goods.
 - 6. Repairs on furnishings and equipment.
 - 7. Lodging.
- IV. Household Furnishings and Equipment.
 - 1. Furniture, carpets and rugs, pictures, dishes, silver, kitchen utensils, fruit jars and canning equipment, brooms, mops and dusters, vacuum cleaners and sweepers, brushes and laundry equipment.
 - 2. Mirrors, lamps, vases and bric-a-brac, clocks, trunks and bags, sewing machines, musical instruments, radio.
 - 3. Household linens and bedding, curtains and draperies, couch covers and pillows, and yard goods used for the household.
 - 4. Porch furniture, flowers and flower seeds, flower pots and stands, garden hose, pets and supplies for same.
- V. Education.
 - 1. Schooling, lessons in music, art, elocution, and dancing, sheet music and records, books, magazines, and papers.
 - 2. Lectures, concerts, Chautauqua.
- VI. Recreation.
 - 1. Entertainments, theaters, movies, parties, dances, visiting, fairs, picnics and outings.
 - 2. Equipment for sports and games, camera and expenses, swings, bathing suits and caps, toys.
- VII. Health, including Sickness and Funeral.
 - 1. Doctor, dentist, nurse, oculist, medicine, hospital, sick room equipment, funeral.
- VIII. Organization Dues.
 - 1. Farm Bureau, Grange, Lodge, Club, and other organizations.
- IX. Church and Benevolences.
 - 1. Church, charity, Sunday School, Ladies' Aid, Young People's Society.
 - 2. Contributions and donations, including money and goods.
- X. Gifts.
 - 1. Gifts to persons outside the immediate family.
 - 2. Gifts to persons within the family were classified according to their nature.
- XI. Transportation.
 - 1. Travel, carfare, taxi and bus fare, and automobile when used for other than farm business.
- XII. Insurance.
 - 1. Life and accident, health and unemployment insurance, including lodge insurance.
- XIII. Unclassified.
 - 1. Tobacco, chewing gum, soft drinks.

Farm products consumed from the home farm were reported in kind and quantity at the time they were consumed or processed for keeping. These products were priced at the farm price¹ current for the month in the particular section of the State in which they were used.

¹That is, the price the producer could obtain for the product at the farm.

II. GENERAL CHARACTERISTICS OF THE FAMILIES STUDIED

The families studied belonged to the more stable portion of the rural population. Ninety-three per cent of the operators and 80 per cent of the homemakers were the children of farmers. This compares favorably with the percentages found in a recent Ohio population survey of 1063 families, in which 94 per cent of the operators and 87.5 per cent of the homemakers were the children of farmers. Since a higher proportion of the operators among the account keepers were college graduates than among the general farm population, it is not surprising that a higher percentage of their wives came from the non-agricultural occupations.

Two-fifths of the operators had at one time been engaged in some occupation other than farming. Twenty-seven per cent of the operators had some supplementary occupation in addition to farming. Most of these were closely allied to farming, such as Farm Bureau business agents and Farmers' Institute speakers.

All, except one homemaker, were born in the United States. Sixty-seven per cent of the operators and homemakers were born in the county in which they were living. All families had lived on the same farm an average of 14.6 years; owners averaged 16.8 years and renters 7.7 years.

TABLE 1.—Proportion of Ownership and Tenancy Among 187 Account Keepers and Among Total Farm Operators of Ohio

Class of tenure	Account keepers		Total farm operators of Ohio, 1925	
	Number	Per cent	Number	Per cent
Owners	145	77.5	181,347	74.1
Full owners.....	116	62.0	163,421	66.7
Part owners.....	29	15.5	17,926	7.4
Managers.....	1	0.5	1,060	0.4
Tenants.....	41	22.0	62,296	25.5
Total.....	187	100.0	244,703	100.0

Ownership and tenancy.—Table 1 shows the proportion of owners and tenants among the account keepers and compares this proportion with that occurring in the total farm population of Ohio according to the Agricultural Census of 1925. Among the account keepers 77.5 per cent were owners. This is 3.4 per cent higher than the average for the State. The proportion of full owners among the account keepers was slightly lower and the proportion of part owners somewhat higher than for those for the State as a

whole. The percentage of tenancy was a little low. Eight part owners transferred to the tenant column would give the exact proportion of tenancy for the State. Thus, from the standpoint of the owner-tenant classification, the sample was a reasonable one. The renter group was probably above average, however. A high proportion were renting from immediate relatives and really were owners in prospect.

The 145 owners had been owners an average of 15.8 years. Fifty-six per cent had been renters before becoming owners and 25 per cent had been hired men. Nine of the renters had been owners at one time but had again become renters. Sixty-five per cent of the owners had come into possession of their farms by purchasing them, 13 per cent by inheriting them, and 22 per cent by a combination of inheritance and purchase.

Size of farm business.—Table 2 shows the distribution of acres operated by the account keepers and compares this distribution with that of the state of Ohio. The distribution shows that the sample was weighted somewhat in favor of farms of 175 acres and over and did not include a sufficient number of farms under 50 acres. However, the proportions included within the two largest groups, namely, those farms of 50-174 acres in size, were not far from representative. The mean size of farm, 158 acres, was considerably larger than the mean of 90.8 acres for the entire State. However, this average was much increased by two very large farms among the account keepers. By dropping these two cases from the frequency, the mean size of farm was reduced to 143 acres.

TABLE 2.—Acres Operated by 187 Account Keepers and by All Farm Operators of Ohio, 1925

Number of acres	Account keepers		All farm operators of Ohio 1925*	
	Number	Per cent	Number	Per cent
Under 3.....	0	0	192	0.1
3-9.....	4	2	15,652	6.4
10-19.....	0	0	15,580	6.4
20-49.....	7	4	42,232	17.3
50-99.....	46	25	81,537	33.3
100-174.....	83	44	65,978	26.9
175-259.....	30	16	16,710	6.8
260-499.....	13	7	6,062	2.5
500-999.....	2	1	664	0.3
1000-4999.....	2	1	93	†
5000 and over.....	0	0	3	†
Total.....	187	100.0	244,703	100.0
Av. Mean.....	158.0	.....	90.8	.....

*U. S. Census of Agriculture.

†Less than one-tenth of one per cent.

The average number of crop acres² farmed was 88.7; owners had 80.7 crop acres and renters 116.2. The median number was considerably lower, being 67.4 for the total group. The average number of animal units³ possessed by the families was 26. Owners possessed 25.2 and renters 28.3 animal units. The total man-work units⁴ on crops and animals averaged 411 on all farms. On owner farms the average was 368, and on renter farms it was 559. The average number of man-work units on 540 owner farms of eight selected areas of Ohio was 243. Hence, the size of business operated by the account keepers averaged larger than for the State as a whole.

The average value of land and buildings was \$13,645 per farm. Owners averaged \$12,714 per farm and renters \$16,970 per farm. In 1925 the corresponding average for all Ohio farms was \$7,951; owners, \$7,066, and renters \$10,004. The average value of all farm property per farm in Ohio in 1925 was \$9,141. The corresponding average for 66 account keepers of the 1928 group was \$18,237. Thirty-five per cent of these owners carried a farm mortgage which averaged \$4,937 per mortgaged farm.

Size of family.—The average size of family⁵ among the account keepers was 4.5 persons. For owners it was also 4.5 persons and for renters, 4.6 persons. This is slightly larger than the average size farm family in the state of Ohio; various sources of information have shown it to be about 4.2 persons. Eighteen per cent of the families consisted of only two persons, and only one family consisted of more than nine persons. The average number of children born to owners at date of record was 2.9; to renters, 2.6. Of these children, 113 had reached the age of 18 years or more; 89 had left home permanently, while 24 were either at home or were still in school and therefore at home for a part of the year.

Age of operator and homemaker.—The average age of all operators was 47.5 years. Owners averaged 49.7 years and renters 39.7 years. Homemakers averaged three years younger. As far as figures are available, this appears to be about average for the farmers of Ohio. There were fewer young farmers and fewer old farmers in the group than in the total population; however, most of the account keepers were between the ages of 35 and 60.

²Includes hay and all rotated crops.

³An animal unit is a measure of the amount of livestock in terms of one horse, one cow, or their feed consuming equivalent.

⁴A man work unit is the average amount of labor accomplished by one man in ten hours.

⁵“Family” is here used in the sense of household.

Schooling of operator and homemaker.—The average number of grades completed by the homemakers who kept accounts was 10.9; by operators, 10.6. This is higher average schooling than is possessed by the total farm population. Renters, being younger, possessed slightly more schooling than owners. The difference was insignificant, however.

TABLE 3.—Schooling of Operator and Homemaker: 187 Account Keepers and 925 Operators from Ohio Population Survey, Compared

Grade in school finished	Account keepers				Population survey (Operators only)	
	Operators		Homemakers			
	Number	Per cent	Number	Per cent	Number	Per cent
Less than 8th grade	5	3	4	2	820	88.6
Eighth grade.....	68	37	52	28		
Some high school	41	23	43	23	47	5.1
High school graduate	22	12	37	20	32	3.5
Some college.....	20	11	37	20	20	2.2
College graduate.....	25	14	14	7	6	0.6
Total.....	181	100	187	100	925	100.0
Average.....	10.6		10.9			

Schooling of children.—The 113 children who had reached the age of 18 years or more had completed an average of 11.9 grades in school. Twenty-four of them were still in school. Children below the age of 18 were generally up to grade in school.

Reading matter.—The average number of books in the home library was 188. Five families possessed less than 25 books and eight had 500 or more. Renters averaged 149 books per family. Forty-five per cent of the families borrowed books from public libraries during the period in which the accounts were kept. Fifteen per cent of the families did not have access to a public library.

The families received an average of 11 papers and magazines. Renters received one less than the total group. No family was without several. One family received 39 newspapers and magazines. Seventeen per cent of these periodicals were newspapers, 38 per cent were farm journals, 18 per cent were women's magazines, 13 per cent were general literature and current news, 5 per cent were religious periodicals, 3 per cent juvenile, and 6 per cent miscellaneous periodicals.

Facilities for communication.—All of the families who kept records either lived on good all-weather roads or were very close to such roads. Since all but two possessed automobiles, a few miles

travel to town or to church was of little consequence. The great majority lived less than five miles from a school, church, and chief trading center. The nearest neighbors were less than a mile away. A number of the families lived near large cities and showed their preference for the larger places by doing a majority of their buying in them, although smaller towns could have been reached more easily.

Only 15 families, less than 10 per cent, did not have a telephone. Two possessed no automobile. Less than half of the 1926 group of record keepers and a little more than half of the 1927 and 1928 groups possessed a radio.

The farm house.—The farm dwellings occupied by the account keepers were on the whole not new buildings. The average age of these dwellings was 54 years. Only 4 per cent had been built less than 10 years and 14 per cent were 100 or more years old. Renter houses averaged one year older than owner houses.

These dwellings averaged 8.4 rooms. Owner houses had 8.5 rooms and renter houses 8.3 rooms. No dwelling had less than five rooms and 9 per cent had 12 or more rooms. This is perhaps slightly larger than the average sized farm house in Ohio. However, the average size of 441 farm houses of five selected areas located in the same sections of the State in which the account keepers lived was 8.3 rooms.

Forty-five per cent of the owners and 65 per cent of the renters used fewer rooms than the house contained. The average number of rooms used by owners was 7.7; renters used 6.8 rooms. This was 0.9 of a room less than the number available. The average number of rooms used per person was 2.1 for owners and 1.8 for renters. Renters often live in large farm houses, the homes of former owners, and, not possessing sufficient furnishings for the whole, they use fewer rooms per person than do owners.

The average number of bedrooms available per person was 1.1 for owners and for the entire group. Renters had 1.0 bedroom per person. If the urban minimum comfort standard of 1.5 rooms per person and 0.7 bedrooms per person be taken as a norm it is evident that these farm families averaged well above this minimum comfort level. However, it should be noted that 28 per cent of the owners and 43 per cent of the renters fell below this standard for total rooms used, while 16 per cent of the owners and 26 per cent of the renters fell below this standard with respect to number of bedrooms per person. But shall it be said that these families were overcrowded? Perhaps urban housing standards do not apply to farm conditions in room requirements per person.

It must not be supposed that because many of these houses were quite old they were also poor buildings. The older buildings were built when timber was comparatively cheap (only 10 per cent of the houses were of brick), and they were extremely well constructed as a rule. A majority had been rebuilt or remodeled, at one time or another, at costs varying from \$100 to \$2,500. A good majority were said to be in good repair, and about 15 per cent were in need of paint. About 25 per cent had hardwood floors in the dining room and living room. Fifty-one per cent had furnace heat, 52 per cent had electric lights, 38 per cent possessed a bath, 35 per cent a power water supply system, and 30 per cent an indoor toilet. Renter houses were less well supplied with these conveniences than owner houses, however.

TABLE 4.—Additional Living Improvements Desired by 118 Farm Families, 1926 and 1927

Improvements desired	Total	First choice	Second choice	Third choice
Living Improvements:				
Building and grounds:				
New house.....	7	5	2	0
New roof.....	3	2	1	0
Remodel house.....	20	7	8	5
Remodel kitchen.....	13	7	4	2
New basement or cellar.....	2	2	0	0
Repair basement or cellar.....	4	1	1	2
New porch.....	4	3	0	1
Enclose porch.....	8	4	3	1
Paint house:				
Inside.....	5	1	1	3
Outside.....	15	8	5	2
Finish floors.....	3	1	1	1
Window weights.....	2	2	0	0
Weather strips.....	2	2	0	0
Paper house.....	3	2	1	0
Wall moulding.....	3	2	0	1
Fireplace.....	4	2	0	2
New well.....	2	2	0	0
New cistern.....	6	2	4	0
Landscape yard.....	11	3	5	3
Gravel lane.....	1	1	0	0
Conveniences:				
Furnace.....	23	5	12	6
Water system.....	39	10	18	11
Bath.....	33	9	12	12
Septic tank.....	1	0	1	0
Built-in features.....	1	0	0	1
Electricity.....	32	17	11	4
Electric range.....	5	2	2	1
Electric iron.....	1	1	0	0
Electric washer.....	4	3	0	1
Electric vacuum.....	4	2	1	1
Iceless refrigerator.....	3	1	2	0
Furnishings, etc.:				
Piano.....	2	0	1	1
Radio.....	6	1	2	3
Furniture.....	10	1	4	5
Miscellaneous:				
New automobile.....	1	0	0	1
Paint automobile.....	1	0	1	0
Garage.....	2	1	0	1
Total.....	286	112	103	71

Improvements desired.—The families studied were asked, when visited, to state what improvements they were looking forward to making as soon as means and circumstances permitted. In the case of renters the question more nearly took the form of what additional improvements they most desired to have made. The replies were obtained so as to get the first choice first, the second choice second, and so on. Table 4 gives these replies, classified by type of improvement and whether first, second, or third choice.

By far the largest percentage of living improvements desired were in the nature of home conveniences. The outstanding items were heating system, water system, and electricity.

III. INCOME

Total cash receipts.—The average total cash receipts from all sources, of 176 records, was \$3,496. This was high, due to six records with receipts of over \$10,000. The most common receipt group was \$2,000 to \$3,000. Fifty-seven families were in this group. The 1926 group of records showed an average of \$3,542, and less variation than the other two groups. The 1927 group had average receipts of \$3,766, and the 1928 group, \$3,392. The average total cash receipts for owners was \$3,643 and for renters \$2,986.

Those few families which had received a high percentage of their total cash receipts from non-agricultural sources all had total receipts of less than the average for the group.

Sources of total cash receipts.—Although the families under consideration in this report were all farm families, lived on farms, and operated the same, they also possessed sources of supplementary income which accounted for nearly 16 per cent of their total cash receipts. This is not a condition peculiar to these families alone. It is a condition which appears to be increasing with the continued urbanization of the State, particularly in the northeastern quarter. Table 5 indicates the distribution of receipts according to the sources from which they were received. "Miscellaneous earnings", which amounted to nearly ten per cent of the non-agricultural receipts, included paid labor, such as road work, hauling, driving a school bus, personal services, such as jury service, local paid officerships, earnings as farm institute speaker, and the like.

The types of farming practiced by the account keepers were varied, although 45 per cent were classed as general farming. Twenty-seven per cent received most of their farm receipts from

live stock, 15 per cent from dairy products, and 6 per cent from fruit and truck crops. More than four-fifths of the families, therefore, were practicing general, livestock, and dairy farming.

TABLE 5.—Sources of Total Cash Receipts; 176 Farm Family Records, 1926 to 1928

Sources of total cash receipts	Average amount per farm	Percentage distribution
	<i>Dollars</i>	
Agriculture (sale of crops, animals, and their products)	2,947	84.3
Other sources.....	549	15.7
Miscellaneous earnings.....	339	9.7
Rents.....	84	2.4
Net return from investments	64	1.8
Timber, minerals, etc., sold.....	18	0.5
Net return from savings.....	11	0.3
Boarders.....	11	0.3
Gifts.....	11	0.3
Money from children not at home.....	7	0.2
Money from children at home.....	4	0.1
Total.....	3,496	100.0

Relation of total cash receipts, farm expense, and net cash receipts.—Table 6 indicates the relation existing between total cash receipts, farm expense, and net cash receipts. Farm expense here includes all money returned to the farm business for the year, whether current operating, or investment expense. There was practically no building done, however, and hence the investment expense was fairly uniform and not particularly heavy. "Net Cash Receipts" represents the total receipts from all sources, less farm expenses. It is not equal to farm income.

TABLE 6.—Relation of Farm Expenses and Net Cash Receipts to Total Cash Receipts from All Sources

Total cash receipts (all sources)	Number of families	Farm expenses Average per family	Net cash receipts Average per family
<i>Dol.</i>		<i>Dol.</i>	<i>Dol.</i>
Under 1000.....	6	274	413
1000-1999.....	37	436	1,032
2000-2999.....	57	589	1,907
3000-3999.....	36	1,483	1,945
4000-4999.....	15	2,330	2,006
5000-6999.....	10	2,626	3,301
7000-9999.....	9	4,502	3,847
10000 and over.....	6	10,251	5,016
Total.....	176	1,362	2,134

The relationship of owners and renters with respect to the items of this table may be judged in part from the following comparison of averages:

	Total	Owners	Renters
	<i>Dol.</i>	<i>Dol.</i>	<i>Dol.</i>
Total cash receipts.....	3,496	3,643	2,986
Farm expenses.....	1,362	1,356	1,385
Net cash receipts.....	2,134	2,287	1,601

The relationship of farm expenses to total cash receipts is close^a. It, of course, follows that there is a similarly close relation between total cash receipts and net cash receipts.

IV. EXPENDITURE FOR FAMILY LIVING

The average cash expenditure for living of the 187 family records studied was \$1,126. The 1926 group averaged \$1,139, the 1927 group \$1,159, and the 1928 group \$1,080. Owners averaged \$1,149 and renters \$1,042. When compared with the cash expenditure of other groups of families, Table 7, it is evident that these families rank among those farmers who spend reasonably well for living purposes.

TABLE 7.—Total Expenditure for Living: 187 Account Book Records and Nine Representative Studies Compared

Group	Cash expended per family	Furnished food and fuel per family
	<i>Dollars</i>	<i>Dollars</i>
187 account book records, Ohio, 1926-28.....	1126	306
2886 families, 11 states (Kirkpatrick) ⁵ *, 1922-24.....	914	484
402 families, New York, (Kirkpatrick) ⁶ , 1920-21.....	1283	495
294 families, North Carolina (Anderson) ¹ , 1926.....	1056	738
451 families, Iowa (Thaden) ⁹ , 1923.....	982	438
383 families, Ohio (Kirkpatrick) ⁵ , 1923.....	901	385
300 families, Ohio (Kirkpatrick & Hawthorne) ⁷ , 1926.....	532	360
357 families, Minnesota (Zimmerman) ¹¹ , 1925.....	1025	.....
50 successful families, Minnesota (Zimmerman) ¹¹ , 1925.....	1231	.....
All Ohio farms, 1924-1928 average estimate (Wertz) ¹⁰.....	.....	322

*Superior figures refer to References Cited.

The value of family living received from the farm was lower for the families under consideration than for any of the other groups listed in Table 7. The wide variation in the value of furnished items was due, to a considerable degree no doubt, to variation in method of pricing these furnished items. The method employed in this study was conservative and weighted according to the seasonal cycle of production and price. It is not surprising, therefore, that it produced a lower figure for furnished items than most survey studies. Hawthorne (4) has summarized the results of 30 studies in 21 states made during the years 1918 to 1922 and found that the average value of food and fuel furnished by the

^aThe coefficient of correlation was .91. It would be higher if only farm receipts rather than total cash receipts from all sources were used.

farm was \$432 for 1918, \$380 for 1919, \$323 for 1920, \$286 for 1921, and \$258 for 1922. Considering the fact that the index of farm prices in the United States was 200 in 1918, 124 in 1922, and averaged 135 for the three years 1926-28 (3), it would seem that \$306 compares favorably with the averages of other studies made.

TABLE 8.—Average Expenditure of 187 Farm Families
During the Years 1926-1928

Budget item	Total (187)			Owners (146)			Renters (41)		
	Pur- chased and fur- nished	Pur- chased	Fur- nished	Pur- chased and fur- nished	Pur- chased	Fur- nished	Pur- chased and fur- nished	Pur- chased	Fur- nished
	<i>Dol.</i>	<i>Dol.</i>	<i>Dol.</i>	<i>Dol.</i>	<i>Dol.</i>	<i>Dol.</i>	<i>Dol.</i>	<i>Dol.</i>	<i>Dol.</i>
Food.....	519	228	291	523	228	295	508	230	278
Clothing and dress.....	197	197	.....	194	194	.....	208	208	.....
Operating expense.....	139	124	15	144	128	16	122	109	13
Transportation.....	143	143	.....	148	148	.....	127	127	.....
Furnishings and equip- ment.....	80	80	.....	77	77	.....	90	90	.....
Health.....	59	59	.....	64	64	.....	40	40	.....
Education.....	86	86	.....	96	96	.....	52	52	.....
Recreation.....	28	28	.....	28	28	.....	27	27	.....
Church and benevolence...	47	47	.....	50	50	.....	36	36	.....
Gifts.....	27	27	.....	28	28	.....	21	21	.....
Organization dues.....	11	11	.....	12	12	.....	6	6	.....
Life and health insurance.	84	84	.....	84	84	.....	80	80	.....
Unclassified.....	12	12	.....	12	12	.....	16	16	.....
Total.....	1432	1126	306	1460	1419	311	1333	1042	291

TABLE 9.—Percentage Distribution of Expenditure of 187 Farm
Families During the Years 1926-1928

Budget items	Total (187)			Owners (146)			Renters (41)		
	Pur- chased and fur- nished	Pur- chased	Fur- nished	Pur- chased and fur- nished	Pur- chased	Fur- nished	Pur- chased and fur- nished	Pur- chased	Fur- nished
	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>
Food.....	36	16	20	36	16	20	38	17	21
Clothing and dress.....	14	14	.....	13	13	.....	16	16	.....
Operating expense.....	10	9	1	10	9	1	9	8	1
Transportation.....	10	10	.....	10	10	.....	9	9	.....
Furnishings and equipment.....	5	5	.....	5	5	.....	7	7	.....
Health.....	4	4	.....	4	4	.....	3	3	.....
Education.....	6	6	.....	7	7	.....	4	4	.....
Recreation.....	2	2	.....	2	2	.....	2	2	.....
Church and benevolence...	3	3	.....	3	3	.....	3	3	.....
Gifts.....	2	2	.....	2	2	.....	2	2	.....
Organization dues.....	1	1	.....	1	1	.....	*	*	.....
Life and health insurance.	6	6	.....	6	6	.....	6	6	.....
Unclassified.....	1	1	.....	1	1	.....	1	1	.....
Total.....	100	79	21	100	79	21	100	78	22

*Less than one-half of one per cent.

TABLE 10.—Percentage Distribution of Purchased and Furnished Items; 187 Budgets, 1926-1928

Budget item	All groups			1928 group			1927 group			1926 group		
	Total	Own-ers	Rent-ers	Total	Own-ers	Rent-ers	Total	Own-ers	Rent-ers	Total	Own-ers	Rent-ers
Total budget.....	100	100	100	100	100	100	100	100	100	100	100	100
Purchased.....	79	79	78	79	79	80	79	80	75	77	76	79
Furnished.....	21	21	22	21	21	20	21	20	25	23	24	21
Food.....	20	20	21	20	20	19	20	19	24	22	23	20
Operating expense..	1	1	1	1	1	1	1	1	1	1	1	1
Total food.....	100	100	100	100	100	100	100	100	100	100	100	100
Purchased.....	44	44	45	45	45	47	44	45	39	42	40	48
Furnished.....	56	56	55	55	55	53	56	55	61	58	60	52
Total operating expense	100	100	100	100	100	100	100	100	100	100	100	100
Purchased.....	89	89	89	87	87	89	90	90	85	91	90	90
Furnished.....	11	11	11	13	13	11	10	10	15	9	10	10

The proportion of the total budget furnished by the farm was 21 per cent; for renters it was 22 per cent. The percentage was quite uniform from year to year, being 23 per cent in 1926 and 21 per cent in 1927 and 1928. Owners and renters varied somewhat. See Table 9.

One per cent of the total furnished budget was composed of operation goods; the remainder was food materials. By dividing food into purchased and furnished items it was found that 44 per cent was purchased and 56 per cent furnished. Of the total operation goods, 11 per cent was furnished and 89 per cent purchased. There were only slight differences between this distribution for owners and renters.

TABLE 11.—Comparison of Expenditures of 187 Ohio Farm Families and 2886 Farm Families of 11 States, 1922-1924

Budget item	187 Ohio records			2886 families of 11 states 1922-1924		
	Total	Owners	Renters	Total	Owners	Renters
Total budget.....	<i>Dol.</i> 1432	<i>Dol.</i> 1460	<i>Dol.</i> 1333	<i>Dol.</i> 1398	<i>Dol.</i> 1497	<i>Dol.</i> 1197
Food.....	519	523	508	659	686	606
Clothing.....	197	194	208	235	254	197
Operating expense.....	282	292	249	213	231	177
Furnishing and equipment.....	80	77	90	40	43	32
Insurance, life and health.....	84	84	80	41	44	33
Health.....	59	64	40	61	63	58
Advancement.....	172	186	121	105	128	58
Personal.....	27	28	21	41	45	34
Unclassified.....	12	12	16	3	3	2
Food.....	519	523	508	659	686	606
Purchased.....	228	228	230	218	225	203
Furnished.....	291	295	278	441	461	403
Operating expense.....	282	292	249	213	231	177
Purchased.....	267	276	236	170	184	141
Furnished.....	15	16	13	43	47	36

Of the total budget, 36 per cent went for food, 16 per cent being purchased food. Clothing and dress took 14 per cent, operating expense and transportation took 20 per cent, furnishings and equipment 5 per cent, and health 4 per cent. Six per cent went for life and health insurance, while education, recreation, church and benevolence, and organization dues accounted for 12 per cent. Owners spent a slightly higher percentage for operation goods, transportation, health and education, while renters spent slightly more for food, clothing and dress, and furnishings and equipment.

In Table 11, a comparison is made between the expenditure of the 187 families under consideration and the expenditures of 2,886 farm families selected for study in 11 states by the United States Department of Agriculture, 1922-1924 (5). Since the classification of expenditures is not quite the same in the two studies they cannot be completely compared, but some changes make them comparable in their major aspects. The 187 Ohio families had a higher average cash expenditure for living than did the 2,886 families, but averaged less food and fuel from the farm. The former spent higher average amounts of cash for operating expense, furnishings and equipment, advancement and life insurance, and lower average amounts for food and clothing. The groups of expenditures called "personal" are not strictly comparable. There was less difference between the expenditures of owners and renters in the Ohio group due to the high type of renters included in the study.

TABLE 12.—Comparison of Percentage Distributions of Expenditure of 187 Ohio Farm Families and 2886 Farm Families of 11 states, 1922-1924

Budget item	187 Ohio records			2886 families of 11 states, 1922-1924		
	Total	Owners	Renters	Total	Owners	Renters
	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>
Total budget.....	100	100	100	100	100	100
Food.....	36	36	38	47	46	50
Purchased.....	14	13	16	17	17	16
Clothing.....	20	20	19	15	15	15
Operating expense.....	5	5	7	3	3	3
Furnishings and equipment.....	6	6	6	3	3	3
Insurance—life and health.....	4	4	3	4	4	5
Health.....	12	13	9	8	9	5
Advancement.....	2	2	1	3	3	3
Personal.....	1	1	1	*	*	*
Unclassified.....						
Food.....	100	100	100	100	100	100
Purchased.....	44	44	45	33	33	33
Furnished.....	56	56	55	66	66	66
Operating expense.....	100	100	100	100	100	100
Purchased.....	89	89	89	80	80	80
Furnished.....	11	11	11	20	20	20

*Less than one-half of one per cent.

TABLE 13.—Relation of Amounts Spent for Various Aspects of Living to Total Cash Expenditure for Living

Total cash expenditure groups	No. of families	Food	Operating expense	Clothing and dress	Furnishings and equipment	Health	Educational	Recreation	Organizational dues	Church and benevolence	Gifts	Transportation	Life insurance	Unclassified
<i>Dollars</i>		<i>Dol.</i>	<i>Dol.</i>	<i>Dol.</i>	<i>Dol.</i>	<i>Dol.</i>	<i>Dol.</i>	<i>Dol.</i>	<i>Dol.</i>	<i>Dol.</i>	<i>Dol.</i>	<i>Dol.</i>	<i>Dol.</i>	<i>Dol.</i>
Under 300	1	109	37	72	11	0	8	4	8	15	15	1	17	0
300-599	20	140	56	81	23	19	17	10	5	23	15	90	15	1
600-899	53	193	97	133	66	41	19	17	7	28	18	95	46	10
900-1199	47	207	116	188	73	63	38	22	12	48	23	153	97	10
1200-1499	32	248	165	211	105	93	91	35	9	67	34	199	79	18
1500-1799	14	311	161	287	112	73	241	50	14	49	34	176	83	25
1800-2099	12	344	187	370	108	62	282	50	19	74	47	182	207	6
2100-2399	2	399	177	481	43	170	424	35	18	85	82	200	74	1
2400-2699	3	333	239	401	82	57	483	86	42	123	79	226	338	46
2700-2999	1	517	281	432	125	6	605	12	14	154	52	151	444	14
3000-3299	2	555	237	713	327	87	155	128	72	121	49	232	470	49
Total	187	228	124	197	80	59	86	28	11	47	27	143	84	12

TABLE 14.—Relation of Percentages of Expenditure for Various Aspects of Living to Total Expenditure for Living

Total cash expenditure groups	No. of families	Food	Operating expense	Clothing and dress	Furnishings and equipment	Health	Educational	Recreation	Organizational dues	Church and benevolence	Gifts	Transportation	Life insurance	Unclassified
<i>Dollars</i>		<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>
Under 300	1	37	12	24	4	0	3	1	3	5	5	6	6	0
300-599	20	28	11	17	5	4	3	2	1	5	3	18	3	*
600-899	53	25	13	17	9	5	3	2	1	4	2	12	6	1
900-1199	47	20	11	18	7	6	4	2	1	5	2	14	9	1
1200-1499	32	18	12	15	8	7	7	3	1	5	2	15	6	1
1500-1799	14	19	10	18	7	5	15	3	1	3	2	11	5	1
1800-2099	12	18	9	19	6	3	15	3	1	4	2	9	11	*
2100-2399	2	18	8	22	2	8	19	3	1	4	4	9	3	*
2400-2699	3	13	10	16	3	2	19	3	2	5	3	9	13	2
2700-2999	1	18	10	15	4	*	22	*	1	6	2	5	16	1
3000-3299	2	17	7	22	10	3	5	4	2	4	2	7	15	2
Total	187	20	11	18	7	5	8	2	1	4	2	13	8	1

*Less than one-half of one per cent.

The percentages of the total budget spent for various purposes indicate that the Ohio group spent higher proportions of the total for operating expense, furnishings and equipment, advancement and life insurance, while the 2,886 families spent higher proportions for food and clothing.

Variations in cash expenditure.—Table 13 indicates the variation in amounts of cash spent for the various subdivisions of the budget in relation to the size of the total purchased budget, and Table 14 indicates the percentage relation which each subdivision of the budget bears to the total purchased budget as the budget varies in size. The following observations of trend may readily be made from these tables: (1) As the total purchased budget increased, the amount of cash spent for all purposes as classified in the budget (budgetary subdivisions) increased also. The most marked increases were for food, clothing, and education. Furnishings and equipment and health fluctuated considerably, but showed a definite tendency to increase. (2) As the total purchased budget increased, the percentages spent for food and transportation decreased; the percentages spent for education, recreation, and life insurance increased; and the percentage spent for all other subdivisions of the budget either fluctuated or remained constant. Thus, it appears from the data at hand, that while all of the major divisions of the budget contributed to its increase, certain of these divisions, namely, education, recreation, and life insurance contributed to that increase in growing proportions since the percentages increased as well as the amounts; while food and transportation contributed to the increase in decreasing proportions, since the percentages decreased.

When expenditures for food, clothing, operation goods, furnishings and equipment, and health were grouped together and called expenditures for "physiological" purposes, that is, expenditures for the primary needs of food, clothing, and shelter, it was found that the amount of cash spent for these purposes increased as the total budget increased, but the percentage so spent decreased. This fact may be shown in a different manner by computing the rate at which this class of expenditure increased and comparing it with the rates of increase of the "non-physiological" class of expenditure and of the budget as a whole. Table 15 shows clearly that while the total cash expenditure for living increased 10.8 times between the lowest and highest expenditure groups, the expenditure for "physiological" purposes increased only 8.4 times. Expenditure for "non-physiological" purposes, on the other hand,

increased 15.8 times, and life insurance increased 27.6 times. This illustrates the well known fact that as the total expenditure for living increases, the major subdivisions of the total increase at differential rates.

TABLE 15.—Relative Increase in Cash Expenditure for Living and Expenditure for Physiological and Non-Physiological Purposes and for Life Insurance

Total cash expenditure groups (Dollars)	Index of increase			
	Total cash expenditure	Physiological expenditure	Non-physiological expenditure	Life insurance
Under 300	100	100	100	100
300- 599	167	139	316	88
600- 899	259	231	380	270
900-1199	354	283	600	571
1200-1499	456	359	888	465
1500-1799	544	412	1155	488
1800-2099	653	468	1294	1218
2100-2399	737	555	1657	435
2400-2699	854	486	2127	1988
2700-2999	945	594	1965	2612
3000-3299	1076	838	1580	2765
Average.....	379	300	694	494

Variation in value of food and fuel furnished.—Since furnished food and fuel do not involve cash expenditure, it is believed that better results are to be obtained by keeping the analysis of these items separate from the analysis of the purchased budget. Table

TABLE 16.—Relation of Value of Food and Fuel Furnished by the Farm to Total Cash Expenditure for Living

Total cash expenditure groups	No. of families	Value of furnished goods			Per cent furnished
		Total	Food	Fuel	
<i>Dollars</i>		<i>Dol.</i>	<i>Dol.</i>	<i>Dol.</i>	<i>Pct.</i>
Under 300	1	138	138	0	32
300- 599	20	200	189	11	29
600- 899	53	272	256	16	26
900-1199	47	335	315	20	24
1200-1499	32	356	341	15	21
1500-1799	14	351	338	13	18
1800-2099	12	309	304	5	14
2100-2399	2	360	342	18	14
2400-2699	3	388	376	12	13
2700-2999	1	424	424	0	13
3000-3299	2	344	330	14	10
Total.....	187	306	291	15	21

16 indicates the relation of furnished values to total purchased values. It will be noted that the value of furnished food increased as the total purchased budget increased, but at a much slower rate, for the total purchased budget increased 10.7 times while the value of food and fuel furnished increased only three times at the most.

This resulted in a decline of the percentage of living furnished, from 32 per cent in the lowest expenditure group to 10 per cent in the highest expenditure group. Hence, as the total purchased budget increased, the total value of food and fuel furnished also increased, but the percentage furnished decreased. The increase in value was due entirely to food, since the value of fuel furnished remained approximately the same, irrespective of cash expenditure.

Since the value of farm products produced for consumption on the home farm has been computed at farm prices (i. e. the prices at which the farmer could sell his products), it is of interest to know the difference between their value so computed and the value of similar products when priced at urban retail prices. Such a comparison serves to give the farmer a clearer notion of how much cash he would be required to pay for the farm products which he would consume if he lived in the city. This is likely to give him a somewhat greater appreciation of the value of his farm garden.

Of course, these home-produced and home-consumed farm products might have been priced only in terms of urban retail prices. Studies which have as their primary aim a comparison of farm and city living often proceed in this manner. It is believed, however, that when imputing a value for farm products consumed on the farm, the farm price is the more accurate one since it comes nearer to giving the value of the products in the environment in which they were consumed.

The problem of pricing farm products consumed on the home farm at city retail prices is not an easy one. For present purposes it has been assumed that the farmer was buying at city prices the same products which he produced and consumed on the home farm, in the same quantities, and with the same seasonal distribution. These assumptions make it clear that the attempt is not to indicate what it would cost the farmer to live in the city. Rather, the attempt here is to evaluate farm living in terms of city prices.

But while these assumptions give some basis for pricing the farm products consumed, they do not help with the problem of the quality of the products. No data are available regarding the quality of the products consumed by these farm families. Common experience would argue that much of it would grade lower than the prevailing grades sold in urban food markets. However, they must be assumed to be of a quality equal to that of urban-sold products if urban prices are used.

The farm products chosen for pricing at urban retail prices were those food products produced and consumed by the families keeping records in 1927 and 1928. See Table 17. Only a few

rarely used products were omitted. The value of the list used constituted 93 per cent of the total value of all home-produced and home-consumed food products of these two groups of families.

The urban prices used were those of the city of Columbus. All prices were obtained as averages for each month. These monthly averages were applied to the quantity of farm products consumed by the farm families during the respective months, thus weighting the value according to volume of consumption.

TABLE 17.—Values of Farm Products Furnished by the Home Farm When Priced at Farm Prices and at Columbus Retail Prices; Products Used by 137 Farm Families, 1927 and 1928

Commodity	Farm value		Columbus retail value	
	Total	Per family	Total	Per family
	<i>Dol.</i>	<i>Dol.</i>	<i>Dol.</i>	<i>Dol.</i>
Whole milk.....	7364	54	14246	104
Cream.....	1723	13	3948	29
Butter.....	3307	24	3958	29
Eggs.....	5099	37	6866	50
Pork.....	5818	42	8278	60
Beef and veal.....	926	7	1870	14
Poultry.....	3869	28	5319	39
Total animal foods.....	28106	205	44485	325
Irish potatoes.....	1904	14	2762	20
Tomatoes.....	541	4	1348	10
Cabbage.....	340	2	539	4
Carrots.....	105	8	272	2
Parsnips.....	29	*	53	*
Peas.....	200	1	563	4
Green beans.....	299	2	558	4
Shelled beans.....	212	2	259	2
Cucumbers.....	173	1	476	3
Pickles.....	117	1	227	2
Sweet corn.....	434	3	927	7
Lettuce.....	290	2	368	3
Beets.....	113	1	330	2
Onions.....	193	1	305	2
Squash and pumpkin.....	131	1	176	1
Melons.....	90	1	124	1
Celery.....	101	1	128	1
Total vegetables.....	5272	38	9415	68
Apples.....	958	7	2025	15
Peaches.....	344	3	789	6
Plums.....	68	*	104	1
Pears.....	233	2	468	3
Grapes.....	143	1	231	2
Cherries.....	164	1	302	2
Berries.....	882	6	1511	11
Total fruits.....	2792	20	5430	40
Grand total.....	36170	264†	59330	433

*Less than fifty cents.

†Does not check with Table 8, due to different number of families.

Table 17 indicates, on the basis of these figures, that the food products produced and consumed on the home farm would cost 64 per cent more than the farm price if purchased at Columbus retail

prices. That is, the farm price of these products amounted to 61 per cent of the Columbus price. Animal products were 58 per cent higher, vegetables were 78 per cent higher, and fruits were 94 per cent higher in Columbus than when priced on the farm. This represents a somewhat greater difference than was obtained for 26 families during the year 1924-25. In that case, however, an average yearly price was used and value was not weighted according to the seasonal distribution of consumption.

Total value of farm living at city prices.—The chief material elements of farm family living obtained from the home farm are food, fuel, and rental of farm dwelling. It is frequently desired to know how much the farm family would have to pay for these same elements of living if they were purchased at city prices. Since the farm value of fuel obtained from the farm by the families who kept records averaged only \$15 per year, the item is small and it may be assumed that the farm price of this fuel bears the same relation to the city price as the farm price of food bears to the city price of food. On this basis the \$306 worth of food and fuel, which was the average value of food and fuel contributed by the farm according to the 187 records of this study, would have cost \$500 if purchased at Columbus retail prices.

It is extremely difficult to arrive at a satisfactory rental charge for the farm house, and for present purposes that need not be done. The farm houses occupied by the farmers who cooperated in this study varied greatly in size, condition, and equipment, but similar dwellings in the city of Columbus rent from \$35 to \$100 per month. An average of \$50 per month seems conservative, since the houses averaged eight rooms each. This would mean a yearly rental of \$600. Add to this \$500 worth of food and fuel furnished and the sum is \$1100. Since these families spent an average of \$1126 in cash for living, it seems probable that as far as expenditures are concerned these farm families are living fully as well as those families in the city of Columbus which are spending from \$2000 to \$2500 per year for family living.

V. YEARLY AND SEASONAL VARIATION IN FAMILY LIVING FACTORS

Yearly variation.—A study of records kept by the same families from year to year revealed the fact that total cash receipts varied more from year to year than total cash expenditure for living. Total cash receipts varied 11.2 per cent between 1926 and 1927 and 17.2 per cent between 1927 and 1928. On the other hand,

total cash expenditure for family living in these same families varied only 8.6 per cent between 1926 and 1927, and 8.8 per cent between 1927 and 1928. Thus, cash expenditure for living was more stable than cash income.

The total value of food and fuel furnished varied only slightly more than total cash expenditure, and the size of household slightly less than the total cash expenditure for living. There was least variation from year to year in cash expenditure for food. The variation here was only 8 to 9 per cent between 1926 and 1928. Clothing varied from 12 to 17 per cent; operating expense, 14 to 15 per cent; health, 36 to 45 per cent; and cash spent for house furnishings varied from 44 to 56 per cent. The greater stability of cash expenditure for living as compared with cash income is therefore due to the great stability of the primary needs, food and clothing. The outgo of cash for these purposes shows much greater regularity than total cash income.

Seasonal variation.—The various seasons of the year are not equal in their demands for the expenditure of resources for family living. Most cash is expended for living, according to 187 family records, during the months of January, September, and December. Least cash is spent during the months of March, April, June, and July. Most food and fuel are contributed by the farm during the months of January, February, and August to December inclusive. Least food and fuel are contributed by the farm during the months of March, April, and May. The total expenditure for living, purchased and furnished, is lightest in spring and early summer, and heaviest in fall and winter.

In these records, cash expended for food was highest during the months of July and August, and lowest in February, March, and April. Operating expense was highest in the winter months and lowest in the spring and early summer months. House furnishings and equipment fluctuated violently and showed no particular seasonal trend. Expenditure for health varied similarly to that for house furnishings. Transportation expense tended toward an even distribution throughout the year. Clothing expense was greatest in January, December, October, November, April, and May; it was lowest in February, June, and July. Expense for education was greatest in January and September, being quite out of proportion in these months. This appeared to be due to a concentration of school expense in these months, together with a disposition to pay periodical subscriptions in January. Educational expense was lowest in June and July. Expense for recreation was high during the

TABLE 18.—Variation of the Total Budget and Its Chief Subdivisions by Months; 187 Family Records

Month	Total Budget	Total purchased	Total furnished	Food			Operation goods			Furnishings, equipment	Clothing	Health	Life insurance	Transportation	Education	Recreation	Church benevolence	Org. dues, gifts	Un-classified
				Total	Purchased	Furnished	Total	Purchased	Furnished										
Percentage																			
January...	10.3	9.9	11.4	9.9	8.2	11.1	11.4	10.8	16.5	7.0	10.8	12.6	11.4	7.6	17.4	7.5	8.6	7.7	8.2
February..	8.2	8.1	8.5	7.8	7.2	8.2	10.5	10.3	12.5	8.7	5.8	8.5	8.0	8.1	12.9	6.2	8.9	5.3	6.6
March.....	7.2	7.4	6.6	6.8	7.6	6.3	8.0	7.6	10.9	9.5	7.4	7.5	5.2	7.9	6.1	6.4	8.9	4.2	9.6
April.....	7.0	7.3	5.6	6.5	7.8	5.5	6.9	6.6	9.3	8.8	8.7	6.3	4.9	8.1	5.4	3.7	10.0	4.7	7.5
May.....	7.7	8.2	6.0	6.9	8.1	6.0	6.2	6.1	7.1	7.0	8.8	8.8	9.9	8.8	7.3	6.8	9.6	5.8	9.3
June.....	7.3	7.2	7.7	8.2	8.7	7.9	5.7	6.0	3.8	9.3	6.9	7.3	5.6	8.5	4.4	6.3	6.1	6.9	9.4
July.....	7.2	7.0	8.1	8.7	9.1	8.4	6.1	6.4	3.3	6.4	6.9	7.4	4.9	7.7	3.1	10.9	6.3	5.9	7.9
August.....	8.1	8.0	8.5	9.0	9.2	8.8	7.4	7.8	3.2	7.1	6.6	8.1	11.0	9.0	4.5	17.5	7.0	2.7	8.1
September..	9.4	9.2	10.0	9.5	8.7	10.3	9.1	9.5	6.1	10.1	7.6	7.6	8.5	8.5	19.0	8.9	8.6	3.7	6.5
October....	8.6	8.4	8.9	9.0	8.9	9.0	9.5	9.9	6.0	8.8	9.5	6.6	7.6	8.7	6.9	7.2	8.0	4.9	8.2
November..	8.2	8.5	7.7	7.9	8.3	7.6	9.8	10.0	8.2	9.3	10.3	8.2	6.9	8.0	5.7	5.4	8.3	7.5	10.9
December..	10.8	10.8	11.1	9.8	8.2	10.9	9.4	9.0	13.1	8.0	10.7	11.1	16.1	9.1	7.3	13.2	9.7	40.7	7.8

months of August and December or early January. August generally brings some relief from the strenuous labor of the earlier spring and summer months and is consequently a favored month for vacations, homecomings, and miscellaneous social affairs. December, of course, brings the Christmas season with its accompanying expense for recreational activities and equipment.

On the whole, it may be concluded that there are very decided seasonal variations in the farm family budget. Some of these, as in the cases of expenditures for health and house furnishings and equipment are merely haphazard in nature. On the other hand, many of the variations, as in the cases of operating expense, clothing, education, recreation, and to some extent food, follow a seasonal order which recurs from year to year with considerable regularity.

VI. RELATION OF EXPENDITURE FOR FAMILY LIVING TO OTHER FACTORS

Relation of total receipts to farm expense and family living.—

It is evident that out of the total receipts which the farm family receives, two major types of expense must be met. The expense of operating the farm business must be paid, and so must the expense of family living. Since both of these types of expense occur throughout the year, it is clear that they compete with each other for the distribution of the total receipts as those receipts are received. In particular cases the results of this competition depend very much upon the attitude of the person disbursing the funds. That is, the more frugal farmer will more often decide upon expenditures for the farm business than will one who has greater interest in better living for the family. Viewed collectively, however, the close relation of farm expense to receipts indicates that as receipts mount they are returned to the farm business in a degree proportional to the increase in size of business⁷.

Table 19 and Chart 2 indicate the relationships of farm expense, family living expense, and surplus, for the data at hand. Farm expense includes expenses of operation such as labor and feed, equipment purchased, general maintenance, and taxes. It does not include land purchased or mortgage payments. Life insurance is kept separate in the table, but is included in family living in Chart 2. While life insurance is usually classed as a part of family living in studies of this sort, it is believed that the

⁷For this reason total cash receipts rather than net cash receipts are used as the measure of income in this analysis. The correlation between cash expended for family living and total cash receipts was virtually the same (.47) as the correlation between family living expense and net cash receipts (.44).

amounts spent for this purpose by the families under consideration were too great to warrant their treatment as a necessary protective expenditure.

It will be seen that as total cash receipts rise, expenditures for farm expense and family living also rise, as does the balance not accounted for by these two types of expenditure. This balance may be treated as investment funds, since it is available to liquidate the mortgage or for other forms of investment. Table 20 gives the rates of increase of each of these items. Total receipts in the highest income group were 22.2 times as high as in the lowest income group; farm expense was 37.4 times as high; investment funds were 34.4 times as high; but family living expenditure was

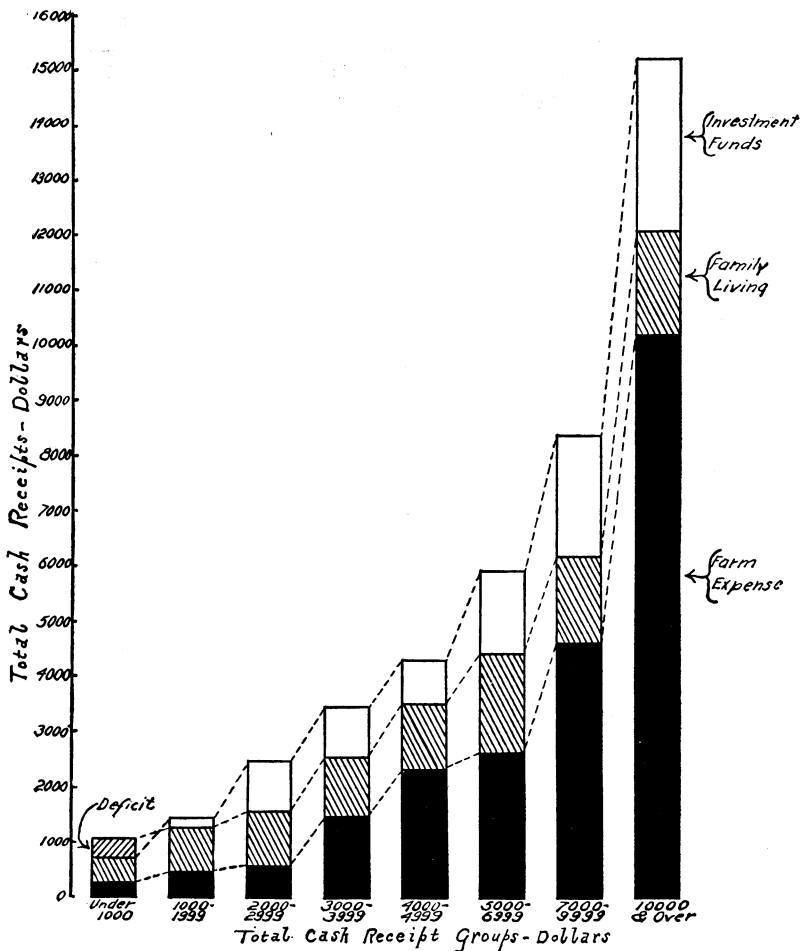


Chart 2.—How the total cash receipts were spent

TABLE 19.—Distribution of Total Cash Receipts Between Farm Expenses and Family Living; 176 Owners and Renters

(1) Total cash receipts (Dollars)	(2) No. of families	Dollars per family					
		(3) Total cash receipts	(4) Total farm expense	Total cash spent for family living			(8) Balance: Column (3) less (4) + (7)
				(5) Total less life insurance	(6) Life insurance	(7) Total	
Under 1000	6	687	274	684	65	749	-336
1000-1999	37	1468	436	825	29	854	178
2000-2999	57	2496	589	1933	69	1002	905
3000-3999	36	3428	1483	1005	95	1100	845
4000-4999	15	4336	2330	1210	104	1214	792
5000-6999	10	5927	2626	1615	180	1795	1506
7000-9999	9	8349	4502	1526	153	1679	2168
10000 and over ..	6	15267	10251	1781	134	1915	3101
Total.....	176	3496	1362	1038	81	1119	1015

only 2.6 times as high in the highest income group as in the lowest income group. These same general relationships have been observed in studies made in other states.

TABLE 20.—Relative Increase in Amount of Receipts, Farm Expense, Expenditure for Family Living, and Surplus

Total cash receipts (Dollars)	Index of increase				
	Total cash receipts	Total farm expense	Family living		Balance, or surplus
			Less life insurance	Including life insurance	
Under 1000	100	100	100	100	100
1000-1999	214	159	121	114	514
2000-2999	363	215	136	134	1241
3000-3999	499	541	147	147	1181
4000-4999	631	850	177	162	1128
5000-6999	863	958	236	240	1842
7000-9999	1215	1643	223	224	2504
10,000 and over	2222	3741	260	256	3437
Average.....	509	497	152	149	1351

It is evident that all of these types of expenditure mount with increasing cash receipts. Farm expense keeps pace with receipts. Family living expenditures mount much more slowly and tend to strike a level after cash receipts reach \$5,000. Investment funds may be lacking or nearly so in the lowest receipt groups, but they become equal to living expenditures as cash receipts mount. They appear to be not far from equal after cash receipts pass the \$2,500 level; but investment funds become greater than living expenditures after receipts pass \$5,000^s. These conclusions appear to be substantially true for both owners and renters as represented by the data at hand.

^sIncluding life insurance with investment funds.

TABLE 21.—Relation of Cash Expenditure for Various Aspects of Family Living to Total Cash Receipts;
176 Family Records, Owners and Renters, 1926-1928

Total cash receipts (Dollars)	No. of families	Food	Operat- ing expense	Clothing	Furni- ture and equip- ment	Health	Trans- porta- tion	Educa- tion	Recrea- tion	Organiza- tion dues	Church and benevo- lence	Gifts	Unclas- sified	Total
Dollars per family														
Under 1000	6	173	70	140	21	53	125	45	13	5	17	13	9	684
1000-1999	37	187	92	149	58	47	131	59	25	8	41	16	13	825
2000-2999	57	211	131	153	69	58	133	60	21	11	45	23	15	932
3000-3999	36	213	112	213	95	68	151	39	29	11	43	22	10	1006
4000-4999	15	306	151	234	93	57	133	85	39	14	54	41	6	1210
5000-6999	10	301	191	337	69	56	184	264	56	19	67	46	26	1616
7000-9999	9	326	173	247	129	80	199	205	44	10	65	40	10	1528
10000 and over	6	331	140	427	164	124	154	230	35	34	91	47	4	1781
Total	176	228	124	196	79	61	143	82	28	11	47	26	13	1038
Percentage														
Under 1000	6	25.3	10.2	20.5	3.1	7.7	18.3	6.6	1.9	0.7	2.5	1.9	1.3	100.0
1000-1999	37	22.7	11.2	18.0	7.0	5.7	15.9	7.2	3.0	0.9	5.0	1.9	1.5	100.0
2000-2999	57	22.6	14.1	16.4	7.5	6.2	14.3	6.4	2.3	1.2	4.8	2.6	1.6	100.0
3000-3999	36	21.2	11.1	21.2	9.5	6.7	14.9	3.9	2.9	1.1	4.3	2.2	1.0	100.0
4000-4999	15	25.2	12.4	19.3	7.6	4.7	11.0	7.0	3.2	1.2	4.5	3.4	0.5	100.0
5000-6999	10	18.6	11.8	20.9	4.3	3.5	11.4	16.3	3.5	1.2	4.1	2.8	1.6	100.0
7000-9999	9	21.3	11.4	16.2	8.4	5.2	13.1	13.4	2.9	0.6	4.3	2.6	0.6	100.0
10000 and over	6	18.6	7.9	24.0	9.2	7.0	8.6	12.9	2.0	1.9	5.1	2.6	0.2	100.0
Total	176	22.0	12.0	18.8	7.6	5.9	13.7	7.9	2.7	1.1	4.6	2.5	1.2	100.0

It may be seen from Table 21 that within the family living budget of expenditures all subdivisions of the budget rise as receipts rise. There is no exception. Expenditure for food practically doubled between the lowest and highest receipt groups, as did operating expense. Transportation, only, increased less. Clothing increased three times, health two and one-half times, furnishings eight times, education five times, recreation three times, organization dues seven times, church and benevolence five times, and gifts four and one-half times. These trends held true, substantially, for both owners and renters.

On the other hand the percentage changes were somewhat different. The percentages spent for food and transportation showed some decline as cash receipts increased; the percentages spent for furnishings, education, gifts, and organization dues rose, while the percentages spent for operation goods, clothing, health, recreation, church and benevolences fluctuated or remained about stationary. This agrees substantially with studies made elsewhere in so far as they can be compared. In the case of renters the percentage spent for education did not rise, while that for recreation did rise. The number of cases was small, however.

These subdivisions of the budget were grouped so that food, clothing, operation expense, furnishings, and health formed a single group (expenditure for physiological purposes) and all other subdivisions of the budget formed another group (expenditure for non-physiological purposes). The two groups were then classified according to total cash receipts, and it was found that as receipts increased these two groups increased at approximately the same rate.

Relation of food and fuel furnished to total receipts.—It has been previously pointed out that the value of food and fuel furnished by the home farm increased as the purchased budget increased, but at a much slower rate. It has also been made clear that the purchased budget increased at a much slower rate than total cash receipts. It is clear, therefore, that the value of food and fuel furnished must increase at a very much slower rate than the total cash receipts. Table 22 indicates that this is so. For while cash receipts increased 22 times between the lowest and highest receipt groups, and cash expenditure for living increased nearly three times, the value of food and fuel furnished increased only 1.3 times at its maximum. This resulted in a decline of the percentage of living so furnished from 28.3 per cent in the lowest cash receipt

group to 11.4 per cent in the highest receipt group. This was a smaller decline in percentage, however, than when these furnished items were classified according to total cash expended for living.

TABLE 22.—Relation of Expenditure for Family Living (Purchased, Furnished, and Total, Less Life Insurance) to Total Cash Receipts; 176 Owners and Renters, by Receipt Groups

Total cash receipts (Dollars)	Number of families	Average total family living			
		Dollars per family			Per cent furnished
		Total purchased and furnished	Total purchased	Total furnished	
Under 1000	6	954	684	270	28.3
1000-1999	37	1117	825	292	26.1
2000-2999	57	1231	933	298	24.2
3000-3999	36	1350	1005	345	25.6
4000-4999	15	1556	1210	346	22.2
5000-6999	10	1939	1615	324	16.7
7000-9999	9	1877	1526	349	18.7
10000 and over	6	2011	1781	230	11.4
Total	176	1349	1038	311*	23.1

*Does not check with Table 8; different number of families.

TABLE 23.—Relation of Size of Family to Total Cash Expenditure for Living and to Value of Food and Fuel Furnished

Number of adult male equivalents per family	Number of families	Total cash expendi- ture per family	Total value of food and fuel furnished per family
Under 2.0	4	<i>Dollars</i> 675	<i>Dollars</i> 138
2.0-2.9	40	840	211
3.0-3.9	51	897	254
4.0-4.9	34	1041	340
5.0-5.9	38	1366	386
6.0-6.9	13	1327	451
7.0 and over	7	1478	593
Total	187	1126	306

Relation of size of family to receipts and living expenditure.—

The average size of household for the families under consideration was 4.5 persons, and the average size of family was 4.2 persons. The size of each varied from two to eleven persons. Obviously this variation in size of the family unit bears an important relation to the cost and content of family living. Numerous studies have found this to be the case. Table 23 indicates the relation of size of family as measured by adult male equivalents to total cash expenditure for living and to the total value of food and fuel furnished by the home farm. The size of family is one of the most important factors which determines increase in both purchased and furnished

items⁹. Since there is no relation between size of family and total cash receipts, it may be stated as a general proposition that in these records increasing the size of family by one adult male equivalent increased the cash expenditure by \$115 and the value of furnished products by \$25. Thus, each adult male equivalent increased the family budget by \$140.

Relation of schooling to cash expenditure for living.—The relation of schooling to expenditure for living is an important matter. Everywhere one encounters the belief that education in the broad sense has the effect of raising the standard of living. Formal schooling is more easily measured than general education, but its relation to standards of living may be slightly different.

TABLE 24.—Relation of Average Schooling of Operator and Homemaker to Total Cash Receipts and to Cash Expenditure for Family Living

Average schooling of operator and homemaker	Number of families	Total cash spent for living, per adult male equivalent	Total cash receipts per adult male equivalent
		<i>Dollars</i>	<i>Dollars</i>
Elementary school only.....	49	215	524
Some high school	72	258	796
High school graduate	15	288	1750
Some college.....	37	289	1221
College graduate.....	6	442	1550
Total.....	179	261	914

For this analysis no measure of general education is available. The measure used is that of grade in school finished by the various members of the family. Table 24 indicates the average schooling of operator and homemaker, by broad groups, and its relation to total cash receipts and cash expenditure for living. Both receipts and living expenditure are expressed in terms of adult male equivalents. Without doubt there is a relationship between average schooling of operator and homemaker and both receipts and expenditure for living when size of household is held constant¹⁰.

The schooling of children was less closely related to cash expenditure for living than the schooling of operator and homemaker. Cash expended for children in school increased the total expenditure for living by that amount, but there was no evidence that the family spent more money for other purposes because the

⁹The coefficient of simple correlation between size of household and total cash expenditure for living was .46. When total cash receipts and size of family were used as independent variables and total cash expenditure for living was used as the dependent variable, the coefficient of multiple correlation was .63.

¹⁰The coefficient of simple correlation between average schooling of operator and homemaker and cash expenditure for living was .36; the partial correlation between schooling and living expenditure with receipts held constant was .26.

children were being well educated. In fact, it appears that the families even curtailed expenditure for many purposes in order to be able to spend more for education and thereby keep the children in school. Table 25 indicates how the total expenditure of families having children in college compared with that of families having no children in college.

**TABLE 25.—Comparison of Cash Spent for Living and for Education
Among 21 Families Having Children in College and 166
Families Having No Children in College**

Families having	Number of families	Adult male equivalents per family	Cash spent for living per family		Cash spent for education per family	
			Total	Per adult male equivalent	Total	Per adult male equivalent
One or more children in schools of college grade.....	21	4.7	Dol. 1516	Dol. 326	Dol. 294	Dol. 63
No children in schools of college grade.....	166	3.7	1075	294	60	16

It will be noted that when allowance is made for differences in size of family and amounts spent for education, there is practically no difference in the cash expenditure for living in the two groups.

Relation of conveniences possessed to cash expenditure for living.—The possession of such conveniences as furnace heat, electric lights, and power water supply was significantly related to total cash expenditure for living, but only very slightly related to total cash receipts¹¹. There was also a close relation between possession of these conveniences and the convenient and efficient organization of the kitchen.

Relation of affiliation with organizations to cash expenditure for living.—The affiliation of all members of the family who were ten or more years of age with community organizations was measured. Membership, attendance, offices held, and financial support were considered. It was found that there was a direct and significant relation between these organization affiliations and the amount of cash spent for living¹². Those families that took an active part in the organized life of the community did not have higher cash receipts but they spent more for family living.

¹¹The coefficient of simple correlation between conveniences and cash expenditure for living was .38; between conveniences and total cash receipts .16.

¹²The coefficient of simple correlation between organization affiliation and cash expenditure for living was .26; between organization affiliation and total cash receipts .06.

Relation of certain other factors to cash expenditure for living.—In addition to those factors already mentioned other factors which were found to possess a significant relation to cash expenditure for living were, number of books and amount of periodical literature which the family possessed, the amount of money invested in furniture, and the total capital possessed by the family. The relationships were not high, however, and they were closely interrelated with other factors¹³.

SUMMARY

This bulletin deals with the family living of 117 Ohio farm families. The information was supplied by 187 account book records and 187 survey schedules for the years 1926, 1927, and 1928. One hundred forty-six records were supplied by owner-operators, and 41 by renter-operators.

The average total cash receipts from all sources was \$3,517. For owners it was \$3,643, and for renters \$2,986. Nearly 16 per cent of all cash receipts were obtained from non-agricultural sources. This average is probably twice as high as that for all farmers of the State.

The average schooling of operator and homemaker was also considerably above the average for the State.

The families spent an average of \$1,126 per year in cash for family living and obtained food and fuel from the home farm to the value of \$306 per year, making a total yearly budget of \$1,432, not including rent. Owners spent an average of \$1,149 in cash and renters \$1,042. Owners supplied food and fuel from the farm to the value of \$311, and renters \$291. The average number of persons per household was 4.5; owner households averaged 4.5 persons, and renter households 4.6 persons.

The food and fuel furnished by the home farm would have cost 64 per cent more if purchased at Columbus retail prices. When house rent is added it appears that these families were living as well as Columbus city families which were spending from \$2,000 to \$2,500 per year for family living.

From year to year, in the same family total cash receipts varied more than cash expenditure for living. Expenditure for food varied least from year to year, and expenditure for health and house furnishings most.

¹³By the use of four factors (receipts, schooling, conveniences, and organization affiliation), with size of family held constant, it was possible to account for approximately one-half of the variation in cash expenditure for living. That is, the multiple correlation coefficient obtained was .70.

There were decided seasonal variations in the family budget, both for cash expended and food and fuel furnished.

As total cash receipts increased, cash expenditure for all aspects of family living increased. The total expenditure for living increased at a so much slower rate than receipts, however, that the correlation between the two was not high. Total cash receipts and size of household accounted for 35 per cent of the total variation in cash expenditure for living. When average schooling of operator and homemaker, number of conveniences possessed, and index of organization relationships were added to the list of related factors, one-half of the total variation in cash expenditure for living was accounted for.

There was no close relation between value of food and fuel furnished and either total cash receipts or total cash expenditure for living.

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